incorporating phthalic-based polyester polyols having some oleochemical content. Applicant respectfully traverses this rejection and submits that the claims are not rendered obvious by the cited references.

The teachings of van der Wouden and Magnus would not render the present invention obvious to a person of ordinary skill in the art. In reviewing obviousness rejections, the Federal Circuit has stated that where claimed subject matter is rejected as obvious in view of a combination of references, "a proper analysis under § 103 requires, *inter alia*, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success." In re Vaeck, 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991). The Federal Circuit emphasized that "[b]oth the suggestion and the reasonable expectation of success must be found in the prior art, not in the applicant's disclosure." Id. Contrary to the Examiner's position, Magnus in view of van der Wouden does not suggest a reasonable expectation of success in making the composition of the instant claims.

Van der Wouden at page 1, column 1, lines 32-35 notes that the choice of blowing agent "strongly influences" polyurethane foam formulations, and that a key when considering using alternative blowing agents is their different "solubility and compatibility with polyurethane raw materials" as compared to CFCs. Van der Wouden states that existing polyol/CFC blends must be reformulated to accommodate pentane as blowing agent due to the different "chemical and physical characteristics" of hydrocarbons as compared to CFCs. Van der Wouden therefore constructs and utilizes oleochemical-based polyester polyol reaction products of dimer fatty acids and polyalcohols. Van der Wouden at page 2, column 2, line 4 states that while polar polyols are compatible with the generally polar fluorocarbons, "[t]o achieve good compatibility with the apolar pentane, in pentane blown systems more apolar polyols have been used." Van der Wouden at page 3, column 1, line 36 then produces experimental results demonstrating that pentane solubility increases with decreasing polyester polyol polarity. Van der Wouden thus teaches that one of ordinary skill in the art contemplating use of pentane should select polyester polyols having low polarity.

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Magnus teaches that aromatic polyester polyol reaction products of a phthalate-based diacid, a low molecular weight diol, a hydrophobe which can include a fatty acid, and a nonionic surfactant are directly compatible with fluorocarbon blowing agents. Magnus addresses the problem of phthalate-based polyester polyols being generally poorly compatible with fluorocarbons. Magnus is silent regarding the suitability of phthalate-based polyester polyols in hydrocarbon-containing blends.

Van der Wouden provides no reasonable expectation that replacing fluorocarbons with pentane in the phthalate-based polyester polyol blends of Magnus would succeed because phthalate-based polyester polyols are very different in polarity compared to the oleochemical-based polyester polyols of van der Wouden. Van der Wouden's polyester polyols do not contain phthalate-based diacids. Incorporating esterified phthalic acid into a polyester polyol having some fatty acid content considerably increases polarity compared to a polyester polyol like van der Wouden's, which utilizes only a dimer fatty acid and hence has no phthalic acid present.

That the polarities of phthalic acid esters are much higher than the polarities of dimer acid esters can be seen can by comparing solubility parameters. The higher the solubility parameter, the more polar the material. Oleic acid is representative of the fatty acids employed by van der Wouden. Although a solubility parameter value for dimer oleic acid methyl ester is not available, oleic acid has the same hydrocarbon to carboxylic acid weight ratio as would a dimer of oleic acid, so the solubility parameter of the mono-acid ester would be expected to be similar. Methyl oleate has a solubility parameter of 15.2. Polymer Handbook 542 (J. Brandrup & E. H. Innergut eds., 3d ed. 1989). By contrast, dimethyl phthalate has a much higher solubility parameter of 22.1. *Id.* Therefore, phthalate-based polyester polyols having some fatty acid content, like those of Magnus and the instant claims, are more polar than Van der Wouden's solely fatty acid-based polyester polyols.

In sum, van der Wouden teaches that lower polarity polyester polyols are required for pentane compatibility. But the phthalate-based polyester polyols of the instant claims are higher in polarity than the polyols of van der Wouden. That higher-polarity polyester polyols can be compatible with pentane is counter to the teachings of van der Wouden. And Magnus is silent regarding pentane compatibility of higher-polarity phthalate-based polyester polyols. Accordingly, one skilled in the art would not have a reasonable expectation of success from

Magnus in view of van der Wouden that the higher-polarity phthalate-based polyester polyols of the instant claims would be compatible with pentane.

For at least the above reasons, Applicant respectfully submits that van der Wouden and Magnus are not an effective combination to reject claims 1-15 for obviousness under § 103(a). Withdrawal of the § 103 rejection is in order and is respectfully requested.

Reconsideration of this application is respectfully requested and a favorable determination is earnestly solicited. Should the Examiner believe that a discussion of this matter would be helpful, the Examiner is invited to telephone the undersigned at (312) 913-0001.

Respectfully submitted,

Dated: October 5, 1998

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